Modern Engineering

Day 4

Prudential Financial

GENERAL ASSEMBLY

Whilst we wait....

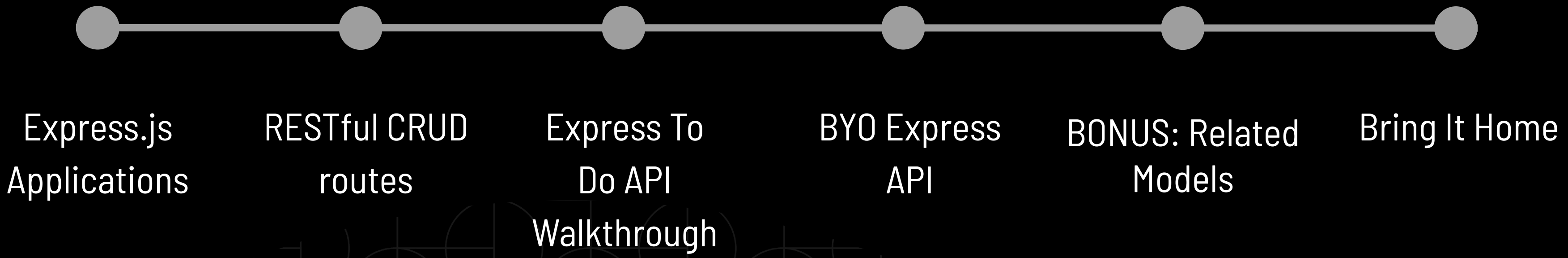
In chat write:

A book/movie/TV series that will blow our mind.

Let’s give everyone a min or two to join

Building a Database-Backed API

LESSON ROADMAP



Express.js Applications

RESTful CRUD routes

Express To Do API Walkthrough

BYO Express API

BONUS: Related Models

Bring It Home

MEF MODULE 1 DAY 4: Building a Database-Backed API

Schedule	
9:00–9:15 am	Welcome and Warm-Up
9:15–9:30 am	Building APIs with Express
9:30 am–12:30 pm	**To Do API Code-Along**
12:30–1:30 pm	Lunch
1:30–4:50 pm	**Build Your Own API**
4:50-5:00 pm	Bring It Home

LEARNING OBJECTIVES

1. Identify the necessary routes to enable full CRUD functionality in an API
2. Construct the correct SQL queries to power application logic
3. Create an Express API that enables CRUD functionality on a SQL-based database model
4. Implement related data in an Express application

Building a Database-Backed API

Express

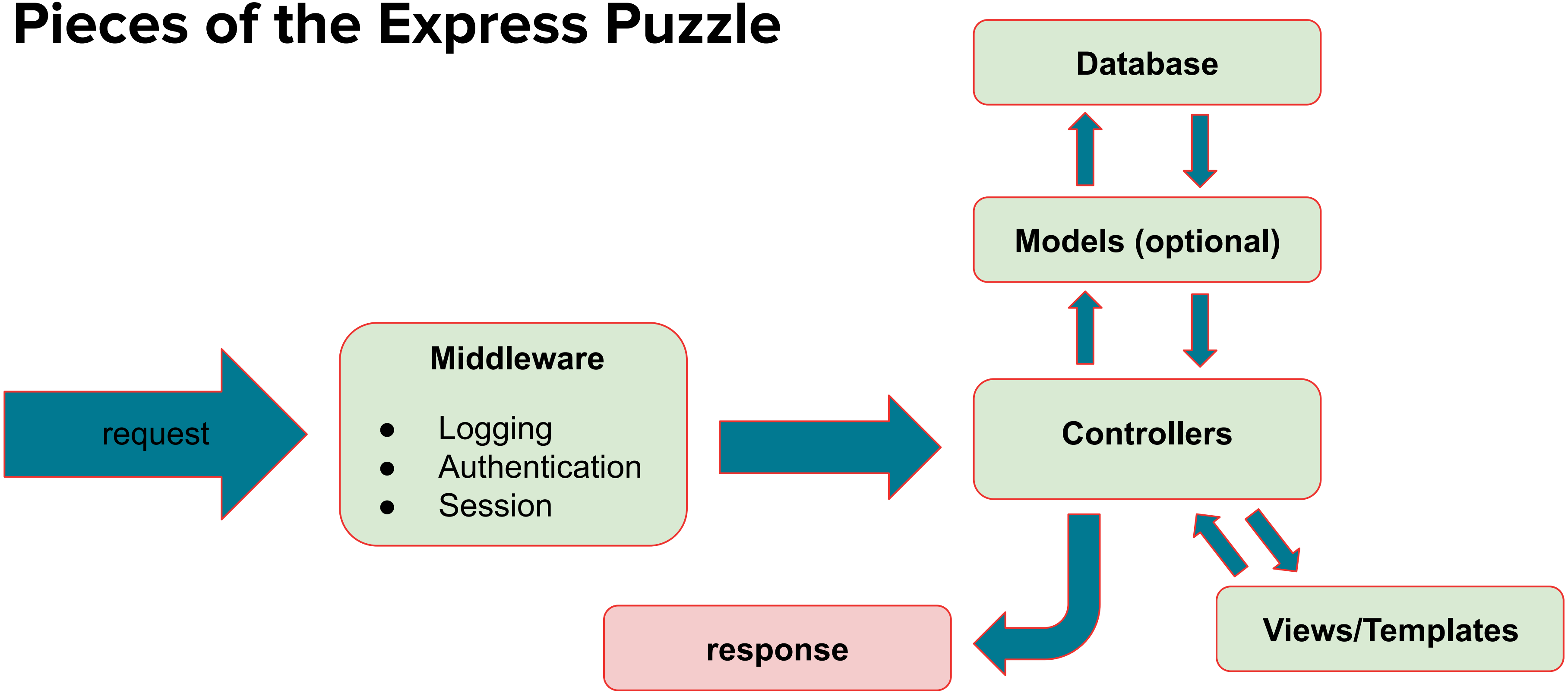
Building Servers with Express.js

Express.js is the most popular JavaScript library for creating back-end server applications, with optional front-end templating support as well.

Put as simply as possible, Express accepts HTTP requests from clients and returns HTTP responses.

Of course, it's never that easy...

Pieces of the Express Puzzle



request

Middleware

- Logging
- Authentication
- Session

Database

Models (optional)

Controllers

Views/Templates

response

CRUD Applications

To cover all our bases, applications typically ensure that users can perform a full range of actions on specific collections of data:

Create resources
Read information from the collection
Update resources
Delete resources

In this lesson, we'll learn to set up Express routes that enable CRUD functionality in our web applications.

A Typical CRUD App with the Seven RESTful Routes

URL Path	Method	Name	Purpose
"/reviews"	GET	index	Show the home page for this collection
"/reviews"	POST	create	Add a new item to a collection
"/reviews/<id>"	GET	show	Show details of a specific item
"/reviews/<id>"	PUT	update	Update details of a specific item
"/reviews/<id>"	DELETE	delete	Delete an item
"/reviews/new"	GET	new	Show the form to create a new item
"/reviews/<id>/edit"	GET	edit	Show the form to update a specific item

Our Goal: A CRUD API with NO VIEWS

URL Path	Method	Name	Purpose
"/api/reviews"	GET	index	Return all items for this collection
"/api//reviews"	POST	create	Add a new item to a collection
"/api/reviews/<id>"	GET	show	Return details of a specific item
"/api/reviews/<id>"	PUT	update	Update details of a specific item
"/api/reviews/<id>"	DELETE	delete	Delete an item
"/reviews/new"	GET	new	Show the form to create a new item
"/reviews/<id>/edit"	GET	edit	Show the form to update a specific item

Building a Database-Backed API

Express Todo API Walkthrough

Computers Out:

Todo API Code Along

Let’s hop into GitHub and build an API with this Node Express API Code Along.

https://ga.co/48sBleZ

Building a Database-Backed API

Choose your Own Adventure Express API

Solo Exercise:

Choose Your Own Express API

4 hours

Follow the instructions in https://git.generalassemb.ly/ModernEngineering/pru-individual-in-class-app.